



PCT/AU2004/000541

REC'D 09 JUN 2004

WIPO PCT

Patent Office  
Canberra

I, JULIE BILLINGSLEY, TEAM LEADER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Complete specification in connection with Application No. 2003204438 for a patent by SAILNOTE PTY LTD. as filed on 30 May 2003.

BEST AVAILABLE COPY



WITNESS my hand this  
Fifth day of May 2004

JULIE BILLINGSLEY  
TEAM LEADER EXAMINATION  
SUPPORT AND SALES

**PRIORITY DOCUMENT**  
SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH  
RULE 17.1(a) OR (b)

## HAIR COLOURANT APPLICATOR

### FIELD OF THE INVENTION

The present invention relates to an apparatus for applying hair colourant. The invention is particularly applicable where there is a need to apply hair colourant to localised areas, for example to hair roots and hairlines.

### BACKGROUND TO THE INVENTION

In Australia approximately 20-30% of the female population dye or colour their hair from time to time. Hair colourants or dyes are commercially available in a pack for use in the home. Such a pack typically includes a container of a peroxide developer with a lid in the form of a removable nozzle that may be unscrewed from a neck of the applicator. The pack also contains a bottle of liquid dye and a pair of plastic gloves. The dye is firstly added to the peroxide developer in the soft-sided bottle and mixed to form a colouring mixture that is applied to the hair through the nozzle. The mixture is rubbed into the hair with the gloves being worn to prevent staining of the hands.

There are a number of problems associated with the prior-art approach described above. One problem is that the approach is not well suited to retouching the roots of the hair after the hair has grown out of the scalp subsequent to initial dying. This is because there are difficulties in applying small amounts of the dye mixture to particular locations of the scalp. Another problem is that the measuring and mixing of the peroxide developer and the liquid dye is inconvenient.

It is an object of the present invention to provide a hair colourant applicator that overcomes, or at least ameliorates, one or more of the above problems.

### SUMMARY OF THE INVENTION

According to a first aspect of the present invention there is provided a hair colourant applicator including:

- 30 a container including an opening having a rim and containing a first part of a two-part hair colourant;

a subcontainer containing a second part of the two-part hair colourant, the subcontainer suspended from the rim into the first part of the two-part hair colourant and divided into an upper portion and a lower portion by a line of weakness;

a cap covering the opening;

5 a sponge affixed to the cap for applying the hair colourant and arranged to communicate with the interior of the container by means of an aperture formed in the cap; and

10 a forcing member arranged to seal the aperture in a first configuration and to transfer breaking force to the lower portion of the subcontainer from the cap in use thereby releasing the second-part into the first-part,

wherein the forcing member, the cap and the subcontainer are arranged so that upon releasing the second-part into the first-part the forcing member no longer seals the aperture.

15 Preferably the container is deformable so that in use a desired quantity of hair colourant may be forced through the aperture.

In a preferred embodiment the forcing member includes a tubular body.

Preferably a rim of the tubular body abuts a ledge protruding from an inside wall of the lower portion of the subcontainer.

20 The tubular body may include a flange located to prevent the forcing member falling into the container subsequent to releasing of the second part into the first part.

Preferably the flange is arranged to abut a portion of the cap prior to releasing of the second part into the first part.

Further preferred features of the present invention will be described in the following detailed description which will refer to a number of figures as follows.

25

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 is a side view of a hair colourant applicator according to a preferred embodiment of the present invention.

30 1. Figure 2 is a side cross-sectional view of the hair colourant applicator of Figure 1.

Figure 3 is an exploded perspective view of the hair colourant applicator of Figures 1 and 2.

## DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

Figures 1, 2 and 3 are respectively a plan side view, a cross-sectional side view and an exploded perspective view of a hair colourant applicator according to a preferred embodiment of the present invention. The applicator includes a container in the form of a bottle 2 which is preferably made of a deformable plastic so that it may be squeezed. The bottle contains a first part of a two-part hair colourant mixture.

Located within the bottle is a sub-container in the form of a cup or "thimble" 8 which has a flange 20 that rests upon the top of the rim 26 of bottle 2 so that the cup is suspended in the first part of the mixture. The thimble contains the second part of the two-part hair colourant mixture. The thimble is formed with a top portion 12 and a lower portion 10 separated by an internal ledge 24. The wall of the thimble adjacent ledge 24 is thinned to form a circle of weakness that is frangible in use as will be explained.

The applicator further includes a forcing member in the form of a hollow plug 12, which has an external flange 14. Plug 12 is hollow and at its upper end terminates in a sealing member in the form of an axial spike 18. The axial spike is supported by three radial spokes 30 which are connected to the plug. Plug 12 is inserted into thimble 10 so that the bottom rim 13 of the plug sits upon ledge 24 of the thimble.

The applicator also includes a hollow cap 4 upon which a sponge 6 is affixed. Cap 4 has an internal thread which mates with a corresponding thread on the neck of bottle 2. The cap has a ledge 16, the underside of which abuts the upper side of flange 14 of plug 12. An aperture 22 is located at the centre of the cap and is obstructed by spike 18.

In use the applicator is provided for purchase in a first configuration as shown in Figure 2 wherein the cup is intact so that the first and second portions of the hair colourant mixture are separated and wherein spike 18 seals aperture 22. A purchaser of the applicator brings the applicator to a second configuration, in which mixing of the first and second parts occurs, by rotating cap 4 so that the underside of ledge 16 is forced against flange 14 of plug 12. Consequently the underside of the lower rim of plug 12 is forced against ledge 24 of thimble 8 until sufficient force is applied to rupture the circle of weakness 28 between the upper and lower portions of

thimble 8. Upon sufficient force being applied the lower portion 10 of the thimble detaches and falls to the bottom of bottle 2.

As the lower portion of the thimble falls, the second part of the mixture that it contains is released into the first-part in the bottle so that the colourant mixture is formed. Simultaneously plug 12 falls through a small distance until the underside of flange 14 abuts the upper side of rim 20. The distance through which plug 12 falls is sufficient to remove spike 18 from aperture 22 of cap 4 so that the aperture is no longer sealed.

The purchaser then shakes the bottle in order to ensure that the two parts of the colourant mix adequately. The bottle is then squeezed thereby forcing some of the mixture through aperture 22 in order to wet sponge 6 with the mixture. Sponge 6 is then applied to the particular areas of the scalp where it is required. Due to the fact that the degree of wetting of the sponge can be controlled by the degree to which bottle 2 is squeezed, inadvertent application of colourant mixture at undesired locations can be easily avoided. That is, the present invention provides a means for precisely and conveniently applying colourant as, for example, is required for retouching hair roots and hairline. It has been found that sufficient colourant can be applied by means of the sponge to effect satisfactory colouring of the hair while maintaining relatively precise control of the areas to which the colourant is applied.

The embodiments of the invention described herein are provided for purposes of explaining the principles thereof, and are not to be considered as limiting or restricting the invention since many modifications may be made by the exercise of skill in the art without departing from the scope of the following claims.

**THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:**

1. A hair colourant applicator including:
  - a container including an opening having a rim and containing a first part of a two-part hair colourant;
  - a subcontainer containing a second part of the two-part hair colourant, the subcontainer suspended from the rim into the first part of the two-part hair colourant and divided into an upper portion and a lower portion by a line of weakness;
  - a cap covering the opening;
  - a sponge affixed to the cap for applying the hair colourant and arranged to communicate with the interior of the container by means of an aperture formed in the cap; and
  - a forcing member arranged to seal the aperture in a first configuration and to transfer breaking force to the lower portion of the subcontainer from the cap in use thereby releasing the second part into the first part,
  - wherein the forcing member, the cap and the subcontainer are arranged so that upon releasing the second part into the first part the forcing member no longer seals the aperture.
2. A hair colourant applicator according to claim 1, wherein the container is deformable so that in use a desired quantity of hair colourant may be forced through the aperture.
3. A hair colourant applicator according to claim 1 or claim 2, wherein the forcing member includes a tubular body.
4. A hair colourant applicator according to claim 3, wherein a rim of the tubular body abuts a ledge protruding from an inside wall of the lower portion of the subcontainer.
5. A hair colourant applicator according to claim 4, wherein the tubular body includes a flange located to prevent the forcing member falling into the container subsequent to releasing of the second part into the first part.

6. A hair colourant applicator according to claim 5, wherein the flange is arranged to abut a portion of the cap prior to releasing of the second part into the first part.

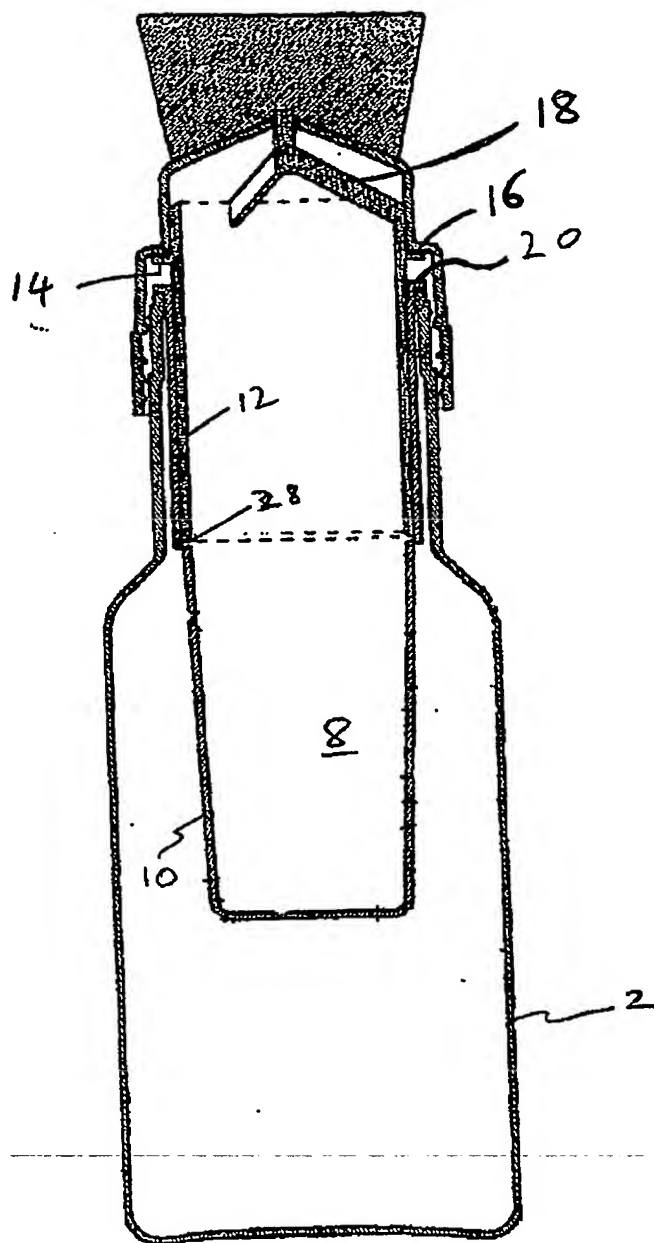
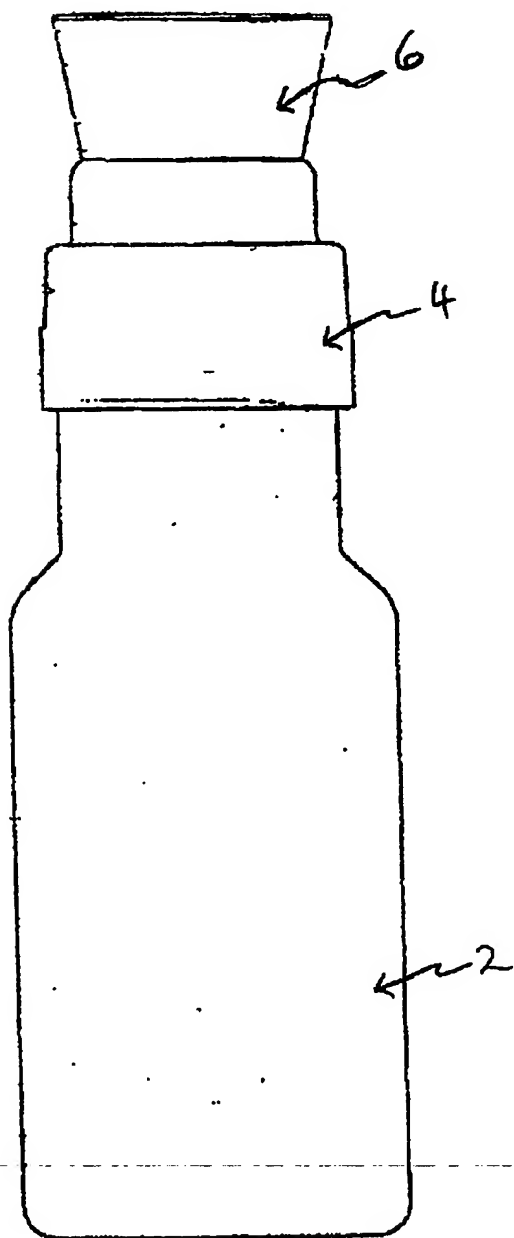
7. A hair colourant applicator substantially as described herein with reference to the drawings.

**Dated this 29th Day of December 2003**

**SAILNOTE PTY LTD**

**By my attorneys**

**Eagar Newcomb & Buck Patent and Trade Mark Attorneys**





2/2

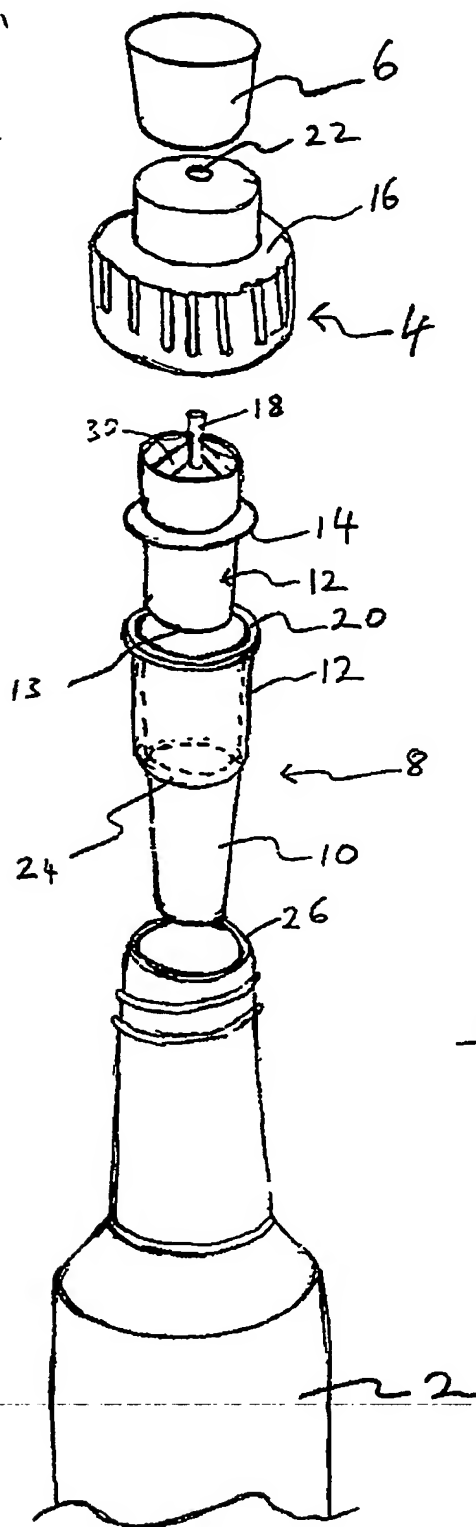


Fig. 3

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**